

## ABSTRACT

To provide a hydrogen generator for a fuel cell for generating a hydrogen-rich gas by steam reforming a source of hydrocarbon fuel gas and supplying the hydrogen-rich gas to a fuel cell or the like to make it possible to efficiently heat a reforming catalyst in a reforming pipe by a combustion gas.

A reforming pipe in which a reforming pipe is formed by filling a reforming catalyst between an erect pipe and a polygonal or wavelike outer pipe surrounding the erect pipe and an outermost pipe in which vertexes of the polygonal or wavelike outer pipe are inscribed to the contour of the reforming pipe are set to form a route of a reformed gas between the outer pipe and the outermost pipe. It is preferable to concentrically arrange a combustion pipe, the reforming pipe, the outermost pipe, the heat insulating means, a CO transformer, a first spatial portion, a CO eliminator, a second spatial portion, and a vessel in order.